

SEQUENCE LISTING

<110> LI, Shyr-Jiann et al.

<120> ISOLATED MONKEY CATHEPSIN S PROTEINS,
NUCLEIC ACID MOLECULES ENCODING MONKEY CATHEPSIN S PROTEINS,
AND USES THEREOF

<130> CL001507

<160> 11

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<210> 1

<211> 1798

<212> DNA

<213> Cynomologous monkey

<400> 1

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<211> 331

<212> PRT

<213> Cynomologous monkey

<400> 2

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			20					25					30		
Lys	Thr	Tyr	Gly	Lys	Gln	Tyr	Lys	Glu	Lys	Asn	Glu	Glu	Ala	Val	Arg
		35					40					45			
Arg	Leu	Ile	Trp	Glu	Lys	Asn	Leu	Lys	Phe	Val	Met	Leu	His	Asn	Leu
	50					55					60				
Glu	His	Ser	Met	Gly	Met	His	Ser	Tyr	Asp	Leu	Gly	Met	Asn	His	Leu
65					70					75					80
Gly	Asp	Met	Thr	Ser	Glu	Glu	Val	Met	Ser	Leu	Met	Ser	Ser	Leu	Arg
				85					90					95	
Val	Pro	Ser	Gln	Trp	Gln	Arg	Asn	Ile	Thr	Tyr	Lys	Ser	Asn	Ala	Asn
			100					105					110		
Gln	Ile	Leu	Pro	Asp	Ser	Val	Asp	Trp	Arg	Glu	Lys	Gly	Cys	Val	Thr
	115						120					125			
Glu	Val	Lys	Tyr	Gln	Gly	Ser	Cys	Gly	Ala	Cys	Trp	Ala	Phe	Ser	Ala
	130					135					140				
Val	Gly	Ala	Leu	Glu	Ala	Gln	Leu	Lys	Leu	Lys	Thr	Gly	Lys	Leu	Val
145					150					155					160
Ser	Leu	Ser	Ala	Gln	Asn	Leu	Val	Asp	Cys	Ser	Thr	Glu	Lys	Tyr	Gly
				165					170					175	
Asn	Lys	Gly	Cys	Asn	Gly	Gly	Phe	Met	Thr	Arg	Ala	Phe	Gln	Tyr	Ile
			180					185					190		
Ile	Asp	Asn	Asn	Gly	Ile	Asp	Ser	Asp	Ala	Ser	Tyr	Pro	Tyr	Lys	Ala
	195						200					205			
Thr	Asp	Gln	Lys	Cys	Gln	Tyr	Asp	Ser	Lys	Tyr	Arg	Ala	Ala	Thr	Cys
	210					215					220				
Ser	Lys	Tyr	Thr	Glu	Leu	Pro	Tyr	Gly	Arg	Glu	Asp	Val	Leu	Lys	Glu
225					230					235					240
Val	Val	Ala	Asn	Lys	Gly	Pro	Val	Ser	Val	Gly	Val	Asp	Ala	Ser	His
			245						250					255	
Pro	Ser	Phe	Phe	Leu	Tyr	Arg	Ser	Gly	Val	Tyr	Tyr	Glu	Pro	Ser	Cys
		260						265					270		
Thr	Gln	Asn	Val	Asn	His	Gly	Val	Leu	Val	Val	Gly	Tyr	Gly	Val	Leu
		275					280					285			
Asn	Gly	Lys	Glu	Tyr	Trp	Leu	Val	Lys	Asn	Ser	Trp	Gly	Arg	Asn	Phe
	290					295					300				
Gly	Glu	Glu	Gly	Tyr	Ile	Arg	Met	Ala	Arg	Asn	Lys	Gly	Asn	His	Cys
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Gly	Ile	Ala	Ser	Phe	Pro	Ser	Tyr	Pro	Glu	Ile					
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<210> 3

<211> 330

<212> PRT

<213> Saimiri boliviensis

<400> 3

Met	Lys	Gln	Leu	Val	Cys	Val	Leu	Phe	Val	Cys	Ser	Ser	Ala	Val	Thr
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Gln	Leu	His	Lys	Asp	Pro	Thr	Leu	Asp	His	His	Trp	Asn	Leu	Trp	Lys
			20					25					30		
Lys	Thr	Tyr	Gly	Lys	Gln	Tyr	Lys	Glu	Lys	Asn	Glu	Glu	Ala	Val	Arg
		35					40					45			
Arg	Leu	Ile	Trp	Glu	Lys	Asn	Leu	Lys	Phe	Val	Met	Leu	His	Asn	Leu

50		55		60
Glu His Ser Met Gly	Met His Ser Tyr Asp	Leu Gly Met Asn His Leu		
65	70	75		80
Gly Asp Met Thr Ser	Glu Glu Val Met Ser	Leu Met Ser Ser Leu Arg		
	85	90		95
Val Pro Asn Gln Trp	Gln Arg Asn Ile Thr	Tyr Lys Ser Asn Pro Asn		
	100	105		110
Gln Met Leu Pro Asp	Ser Val Asp Trp Arg	Glu Lys Gly Cys Val Thr		
	115	120		125
Glu Val Lys Tyr Gln	Gly Ser Cys Gly Ala	Cys Trp Ala Phe Ser Ala		
	130	135		140
Val Gly Ala Leu Glu	Ala Gln Leu Lys Leu	Lys Thr Gly Lys Leu Val		
	145	150		155
Ser Leu Ser Ala Gln	Asn Leu Val Asp Cys	Ser Glu Lys Tyr Gly Asn		
	165	170		175
Lys Gly Cys Asn Gly	Gly Phe Met Thr Glu	Ala Phe Gln Tyr Ile Ile		
	180	185		190
Asp Asn Lys Gly Ile	Asp Ser Glu Ala Ser	Tyr Pro Tyr Lys Ala Thr		
	195	200		205
Asp Gln Lys Cys Gln	Tyr Asp Ser Lys Tyr	Arg Ala Ala Thr Cys Ser		
	210	215		220
Lys Tyr Thr Glu Leu	Pro Tyr Gly Arg Glu	Asp Val Leu Lys Glu Ala		
	225	230		235
Val Ala Asn Lys Gly	Pro Val Cys Val Gly	Val Asp Ala Ser His Pro		
	245	250		255
Ser Phe Phe Leu Tyr	Arg Ser Gly Val Tyr	Tyr Asp Pro Ala Cys Thr		
	260	265		270
Gln Lys Val Asn His	Gly Val Leu Val Ile	Gly Tyr Gly Asp Leu Asn		
	275	280		285
Gly Lys Glu Tyr Trp	Leu Val Lys Asn Ser	Trp Gly Ser Asn Phe Gly		
	290	295		300
Glu Gln Gly Tyr Ile	Arg Met Ala Arg Asn	Lys Gly Asn His Cys Gly		
	305	310		315
Ile Ala Ser Tyr Pro	Ser Tyr Pro Glu Ile			320
	325	330		

<210> 4

<211> 331

<212> PRT

<213> Homo sapiens

<400> 4

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	20	25
Lys Thr Tyr Gly Lys	Gln Tyr Lys Glu Lys	Asn Glu Glu Ala Val Arg
	35	40
Arg Leu Ile Trp Glu	Lys Asn Leu Lys Phe	Val Met Leu His Asn Leu
	50	55
Glu His Ser Met Gly	Met His Ser Tyr Asp	Leu Gly Met Asn His Leu
	65	70
Gly Asp Met Thr Ser	Glu Glu Val Met Ser	Leu Met Ser Ser Leu Arg
	85	90
Val Pro Ser Gln Trp	Gln Arg Asn Ile Thr	Tyr Lys Ser Asn Pro Asn
	100	105
Trp Ile Leu Pro Asp	Ser Val Asp Trp Arg	Glu Lys Gly Cys Val Thr

115	120	125
Glu Val Lys Tyr Gln Gly Ser Cys Gly Ala Cys Trp Ala Phe Ser Ala		
130	135	140
Val Gly Ala Leu Glu Ala Gln Leu Lys Leu Lys Thr Gly Lys Leu Val		
145	150	155
Ser Leu Ser Ala Gln Asn Leu Val Asp Cys Ser Thr Glu Lys Tyr Gly		
165	170	175
Asn Lys Gly Cys Asn Gly Gly Phe Met Thr Thr Ala Phe Gln Tyr Ile		
180	185	190
Ile Asp Asn Lys Gly Ile Asp Ser Asp Ala Ser Tyr Pro Tyr Lys Ala		
195	200	205
Met Asp Gln Lys Cys Gln Tyr Asp Ser Lys Tyr Arg Ala Ala Thr Cys		
210	215	220
Ser Lys Tyr Thr Glu Leu Pro Tyr Gly Arg Glu Asp Val Leu Lys Glu		
225	230	235
Ala Val Ala Asn Lys Gly Pro Val Ser Val Gly Val Asp Ala Arg His		
245	250	255
Pro Ser Phe Phe Leu Tyr Arg Ser Gly Val Tyr Tyr Glu Pro Ser Cys		
260	265	270
Thr Gln Asn Val Asn His Gly Val Leu Val Val Gly Tyr Gly Asp Leu		
275	280	285
Asn Gly Lys Glu Tyr Trp Leu Val Lys Asn Ser Trp Gly His Asn Phe		
290	295	300
Gly Glu Glu Gly Tyr Ile Arg Met Ala Arg Asn Lys Gly Asn His Cys		
305	310	315
Gly Ile Ala Ser Phe Pro Ser Tyr Pro Glu Ile		
325	330	

<210> 5

<211> 331

<212> PRT

<213> Canis familiaris

<400> 5

Met Lys Trp Leu Val Gly Leu Leu Pro Leu Cys Ser Tyr Ala Val Ala	
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20	25
Lys Thr Tyr Ser Lys Gln Tyr Lys Glu Glu Asn Glu Glu Val Ala Arg	
35	40
Arg Leu Ile Trp Glu Lys Asn Leu Lys Phe Val Met Leu His Asn Leu	
50	55
Glu His Ser Met Gly Met His Ser Tyr Asp Leu Gly Met Asn His Leu	
65	70
Gly Asp Met Thr Gly Glu Glu Val Ile Ser Leu Met Gly Ser Leu Arg	
85	90
Val Pro Ser Gln Trp Gln Arg Asn Val Thr Tyr Arg Ser Asn Ser Asn	
100	105
Gln Lys Leu Pro Asp Ser Val Asp Trp Arg Glu Lys Gly Cys Val Thr	
115	120
Glu Val Lys Tyr Gln Gly Ser Cys Gly Ala Cys Trp Ala Phe Ser Ala	
130	135
Val Gly Ala Leu Glu Ala Gln Leu Lys Leu Lys Thr Gly Lys Leu Val	
145	150
Ser Leu Ser Ala Gln Asn Leu Val Asp Cys Ser Thr Glu Lys Tyr Gly	
165	170
Asn Lys Gly Cys Asn Gly Gly Phe Met Thr Thr Ala Phe Gln Tyr Ile	

				245					250					255			
Ser	Phe	Phe	Phe	Tyr	Lys	Ser	Gly	Val	Tyr	Asp	Asp	Pro	Ser	Cys	Thr		
			260						265					270			
Gly	Asn	Val	Asn	His	Gly	Val	Leu	Val	Val	Gly	Tyr	Gly	Thr	Leu	Asp		
		275					280						285				
Gly	Lys	Asp	Tyr	Trp	Leu	Val	Lys	Asn	Ser	Trp	Gly	Leu	Asn	Phe	Gly		
	290					295					300						
Asp	Gln	Gly	Tyr	Ile	Arg	Met	Ala	Arg	Asn	Asn	Lys	Asn	His	Cys	Gly		
305				310						315					320		
Ile	Ala	Ser	Tyr	Cys	Ser	Tyr	Pro	Glu	Ile								
				325					330								

<210> 7
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<400> 7

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			20					25					30				
Gly	Lys	Gln	Tyr	Lys	Glu	Lys	Asn	Glu	Glu	Ala	Val	Arg	Arg	Leu	Ile		
		35					40					45					
Trp	Glu	Lys	Asn	Leu	Lys	Phe	Val	Met	Leu	His	Asn	Leu	Glu	His	Ser		
	50					55					60						
Met	Gly	Met	His	Ser	Tyr	Asp	Leu	Gly	Met	Asn	His	Leu	Gly	Asp	Met		
65					70					75					80		
Thr	Ser	Glu	Glu	Val	Met	Ser	Leu	Met	Ser	Ser	Leu	Arg	Val	Pro	Ser		
				85					90					95			
Gln	Trp	Gln	Arg	Asn	Ile	Thr	Tyr	Lys	Ser	Asn	Asn	Gln	Leu	Pro	Asp		
			100					105					110				
Ser	Val	Asp	Trp	Arg	Glu	Lys	Gly	Cys	Val	Thr	Glu	Val	Lys	Tyr	Gln		
		115					120					125					
Gly	Ser	Cys	Gly	Ala	Cys	Trp	Ala	Phe	Ser	Ala	Val	Gly	Ala	Leu	Glu		
	130					135					140						
Ala	Gln	Leu	Lys	Leu	Lys	Thr	Gly	Lys	Leu	Val	Ser	Leu	Ser	Ala	Gln		
145					150					155					160		
Asn	Leu	Val	Asp	Cys	Ser	Thr	Glu	Lys	Tyr	Gly	Asn	Lys	Gly	Cys	Asn		
			165						170					175			
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		180						185					190				
Ser	Asp	Ala	Ser	Tyr	Pro	Tyr	Lys	Ala	Met	Asp	Gln	Lys	Cys	Gln	Tyr		
		195					200					205					
Asp	Ser	Lys	Tyr	Arg	Ala	Ala	Thr	Cys	Ser	Lys	Tyr	Thr	Glu	Leu	Pro		
	210				215						220						
Tyr	Gly	Arg	Glu	Asp	Val	Leu	Lys	Glu	Ala	Val	Ala	Asn	Lys	Gly	Pro		
225					230					235					240		
Val	Ser	Val	Gly	Val	Asp	Ala	Ser	His	Pro	Ser	Phe	Phe	Leu	Tyr	Arg		
			245						250					255			
Ser	Gly	Val	Tyr	Tyr	Glu	Pro	Ser	Cys	Thr	Gln	Asn	Val	Asn	His	Gly		
		260						265					270				
Val	Leu	Val	Val	Gly	Tyr	Gly	Leu	Asn	Gly	Lys	Glu	Tyr	Trp	Leu	Val		
		275					280						285				
Lys	Asn	Ser	Trp	Gly	Asn	Phe	Gly	Glu	Gln	Gly	Tyr	Ile	Arg	Met	Ala		
	290					295					300						
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Glu Ile

310

315

320

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28

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<211> 24
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<213> primer

<400> 11
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24